Appl. No. 10/004,168
Amdt. sent March 2, 2004
Reply to Office Action of December 3, 2003

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims

1 - 20. (Canceled)

1   21.   (Currently amended): An inspection system comprising:
2   an inspection apparatus for detecting positions and sizes of particles or pattern
3   defects on an object to be inspected;
4   an image taking apparatus for taking images of said particles or said pattern
5   defects as detected by said inspection apparatus; and
6   an analysis unit operatively coupled to said inspection apparatus and said image
7   taking apparatus, said analysis unit including:
8   a storage device for storing therein inspection data produced by said
9   inspection apparatus and position information of regions of a circuit pattern to be formed on said
10   object;
11   a calculation device for identifying particles ~~and~~ or pattern defects that are
12   correspondingly positioned in said regions, and calculating failure probabilities for said particles
13   ~~and~~ or said pattern defects positioned in said regions based on their sizes, said failure
14   probabilities further being based on location of said particles or said pattern defects in said
15   regions; and
16   a selection device for selecting particles or pattern defects whose
17   calculated failure probabilities are greater than or equal to a predetermined threshold.

22 and 23.   (Canceled)

1   24.   (Previously presented): The inspection system according to claim 21,
2   wherein said regions are circuit blocks as formed within an LSI chip.

25 and 26.   (Canceled)

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1   27.   (Previously presented): The inspection system according to claim 21,

2   further comprising a simulation device for generating virtual defects at random positions with

3   respect to circuit graphics obtainable from mask layout data forming said circuit pattern, and

4   computing said failure probabilities from connection relationships of said circuit graphics and

5   said defects.

1   28.   (Previously presented): The inspection system according to claim 21,

2   wherein said position information of said regions is generated from mask layout data forming an

3   LSI chip.

29 and 30.   (Canceled)

1   31.   (Previously presented): The inspection system according to claim 24,

2   wherein said position information of said circuit blocks is generated from mask layout data

3   forming an LSI chip.

32 - 35.   (Canceled)

1   36.   (Currently amended): A method for manufacturing semiconductor devices

2   comprising the steps of:

3   a fabrication step for forming circuit patterns on or over a wafer, said circuit

4   patterns constituting a plurality of semiconductor chips;

5   an inspection step for detecting positions and sizes of particles or pattern defects

6   of said wafer;

7   identifying positions and sizes of those of said particles or said pattern defects

8   located in a region of said circuit patterns that constitute one of said semiconductor chips;

9   a calculation step for calculating failure probabilities based on sizes of said

10 particles or said pattern defects in said region and on their location in said region;

11   an extraction step for extracting positions of said particles or said pattern defects

12 with calculated failure probabilities greater than or equal to a predefined threshold; and

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13   producing images of said particles or said pattern defects extracted at said

14   extraction step.

1   37.   (Previously presented): A method for manufacturing semiconductor

2   devices according to claim 36, wherein said regions are circuit blocks within an LSI chip.

1   38.   (Previously presented): A method for manufacturing semiconductor

2   devices according to claim 37, wherein said LSI chip is a system LSI and said circuit blocks

3   include memory portions and logic portions.

39 - 41.   (Canceled)